

Please type a plus sign (+) inside this box

PTO/SB/08A (10-96)  
Approved for use through 10/31/99. OMB 0 6 5 1-0031

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE +

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO				Complete if Known	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				Application Number	
				Filing Date	
				First Named Inventor	Sakhrat Khizroev
				Group Art Unit	2652
				Examiner Name	David Davis
Sheet	1	of	1	Attorney Docket Number	284867-00005

PTO  
09/695679  
10/24/00

U.S. PATENT DOCUMENTS						
Examiner Initials <sup>1</sup>	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
[Handwritten mark]	A	4,078,300		Lazzari	03/14/1978	
	B	4,138,702		Magnetnet	02/06/1979	
	C	4,546,398		Toda et al.	10/08/1985	
	D	4,652,956		Schewe	03/24/1987	
	E	4,731,157		Lazzari	03/15/1988	
	F	4,943,882		Wada et al.	07/24/1990	
	G	4,974,110		Kanamine et al.	11/27/1990	
	H	4,985,792		Boir	01/15/1991	
	I	5,073,836		Gill et al.	12/17/1991	
	J	5,225,953		Wada et al.	07/06/1993	
	K	5,241,430		Janz	08/31/1993	
	L	5,430,589		Moir et al.	07/04/1995	
	M	5,738,927		Nakamura et al.	04/14/1998	
	N	5,796,557		Bagnell et al.	08/18/1998	
	O	5,996,045		Lee et al.	11/30/1999	

FOREIGN PATENT DOCUMENTS								
Examiner Initials <sup>2</sup>	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				

Examiner Signature	[Handwritten Signature]	Date Considered	2/2003
--------------------	-------------------------	-----------------	--------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Unique citation designation number. <sup>2</sup>See attached Kinds of U.S. Patent Documents. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

+ Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box →



Approved for use through 10/31/99. OMB 0651-0031

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	
				Filing Date	
				First Named Inventor	Sakhrat Khizroev
				Group Art Unit	2652
				Examiner Name	Daniel D. Davis
Sheet	1	of	1	Attorney Docket Number	284867-00005

Examiner Initials <sup>*</sup>	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
W	P	KHIZROEV ET AL., <i>Considerations in the Design of Probe Heads for 100 Gbit/in<sup>2</sup> Recording Density</i> , IEEE Transaction of Magnetics, September 1997, Vol. 3, No. 5, pp. 2893-2895.	
W	Q	TOIGO, <i>Avoiding a Data Crunch</i> , Scientific American, May 2000, pp. 58-74, IEEE Press.	

Examiner Signature		Date Considered	2/2003
--------------------	--	-----------------	--------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Unique citation designation number. <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

**Burden Hour Statement:** This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

JUN 06 2002

Technology Center 2800

PTO/SB/08A (10-96)

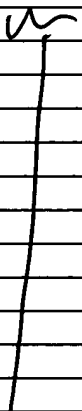

Please type a plus sign (+) inside this box ☒

Approved for use through 10/31/99. OMB 0651-0031

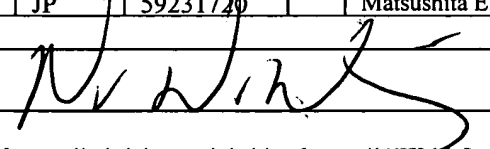
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE +

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO <b>INFORMATION DISCLOSURE</b> <b>STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	09/695,679
				Filing Date	10/24/2000
				First Named Inventor	Sakhrat Khizroev
				Group Art Unit	2652
				Examiner Name	David Davis
Sheet	1	of	3	Attorney Docket Number	284867-00005

U.S. PATENT DOCUMENTS						
Examiner Initials <sup>1</sup>	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
		2,927,163		Brower	03-01-1960	
		3,805,291		Sakurai	04-16-1974	
		3,813,766		Brock et al.	06-04-1974	
		4,001,890		Kayser	01-04-1977	
		4,219,855		Jones, Jr.	08-26-1980	
		4,404,609		Jones, Jr.	09-13-1983	
		4,423,450		Hamilton	12-27-1983	
		4,438,471		Oshiki et al.	03-20-1984	
		4,441,131		Osanai	04-03-1984	
		4,541,026		Bonin et al.	09-10-1985	
		4,575,777		Hosokawa	03-11-1986	
		4,613,918		Kanai et al.	09-23-1986	
			4,631,612		Shiiki et al.	12-23-1986

FOREIGN PATENT DOCUMENTS								
Examiner Initials <sup>*</sup>	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
W		GB	1344890		Int'l Business Machines Corp.	01-23-1974		
I		JP	56087218		Toshiba Corp.	07-15-1981		
		JP	59195311		NEC Corp.	11-06-1984		
W		JP	59231720		Matsushita Electric Ind. Co. Ltd.	12-26-1884		

Examiner Signature		Date Considered	2/2003
--------------------	---	-----------------	--------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Unique citation designation number. <sup>2</sup>See attached Kinds of U.S. Patent Documents. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

+ Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

534164v1

RECEIVED

JUN 06 2002

Please type a plus sign (+) inside this box


 PTO/SP-08A (10-96)  
 Approved for use through 10/31/99. OMB 0651-0031

Technology Center 2000

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE +

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO <b>INFORMATION DISCLOSURE</b> <b>STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	09/695,679
				Filing Date	10/24/2000
				First Named Inventor	Sakhrat Khizroev
				Group Art Unit	2652
				Examiner Name	David Davis
Sheet	2	of	3	Attorney Docket Number	284867-00005

U.S. PATENT DOCUMENTS						
Examiner Initials <sup>*</sup>	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
W		4,639,810		Sakai	01-27-1987	
I		4,649,449		Sawada et al.	03-10-1987	
		4,672,494		Furuya et al.	06-09-1987	
		4,703,382		Schewe et al.	10-27-1987	
		4,742,413		Schewe	05-03-1988	
		4,763,215		Gueugnon et al.	08-09-1988	
		4,839,761		Gatzen	06-13-1989	
		4,860,139		Hamilton	08-22-1989	
		4,873,599		Sueoka	10-10-1989	
		5,016,342		Pisharody et al.	05-21-1991	
		5,068,959		Sidman	12-03-1991	
		5,196,976		Lazzari	03-23-1993	
	W		5,305,516		Imazeki et al.	04-26-1994

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				

Examiner Signature		Date Considered	2/2003
--------------------	--	-----------------	--------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Unique citation designation number. <sup>2</sup>See attached Kinds of U.S. Patent Documents. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

+ Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

RECEIVED

JUN 06 2002

PTO/SB/08A (10-96)

Please type a plus sign (+) inside this box




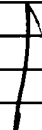




Approved for Release by NSA on 06-11-2013 pursuant to E.O. 13526

Technology Center 2800

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE +

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE</b>  <b>STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				Application-Number	09/695,679
				Filing Date	10/24/2000
				First Named Inventor	Sakhrat Khizroev
				Group Art Unit	2652
				Examiner Name	David Davis
Sheet	3	of	3	Attorney Docket Number	284867-00005

U.S. PATENT DOCUMENTS						
Examiner Initials <sup>1</sup>	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
		5,372,698		Liao	12-13-1994	
		5,606,478		Chen et al.	02-25-1997	
		5,812,350		Chen et al.	09-22-1998	
		5,864,450		Chen et al.	01-26-1999	
		5,920,979		Nepela et al.	07-13-1999	
		5,942,342		Hikosaka et al.	08-24-1999	
		Application No.		Litvinov et al.	Filed	
		09/726,157			11-29-2000	
		Application No.		Crue et al.	Filed	
		09/809,118			03-15-2001	
		Publication No.		Funayama et al.	09-20-2001	
		2001/0022712				
		Publication No.		Komuro et al.	10-11-2001	
		2001/0027603				

FOREIGN PATENT DOCUMENTS								
Examiner Initials <sup>*</sup>	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				

Examiner Signature		Date Considered	2/2003
--------------------	--	-----------------	--------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Unique citation designation number. <sup>2</sup>See attached Kinds of U.S. Patent Documents. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

+ Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.